



BOROUGH OF JARROW.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH
FOR 1907,

BY

J. M. NICOLL, M.B., C.M., EDIN.

JARROW-ON-TYNE :

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To the Chairman and Members of the Sanitary
Committee.

GENTLEMEN,

I again beg to lay before you my Annual Report on the health of the Borough, this being the thirty-fourth of the series.

It is satisfactory to report that in no previous year have the general health conditions been so satisfactory. We have this year a lower general death-rate, a lower zymotic death-rate, and a lower infantile mortality-rate than ever previously recorded in the borough.

For details I beg to refer you to the Report.

I am, Gentlemen,

Your obedient servant,

J. M. NICOLL.

Jarrow, February 22, 1908.

HEALTH REPORT,

1907.

Area of Borough.—1,064 acres.

Density of Population.—32.6 per acre.

During the year there were 14 self-contained, and 21 tenemented houses of two flats each, added to the Borough, these being built in the South and Grange Wards.

VITAL STATISTICS.

Population.—To the end of June the population is estimated at 34,700, the Ward population being as follows:—North, 5,020; South, 6,980; East, 5,100; West, 6,050; Grange, 5,690; Central, 5,860.

Births.—There were 1,157 births registered during the year, equivalent to a birth-rate of 33.3, as compared with 32.0 last year, when the number was 1,109. Of these births, thirty-five were returned as illegitimate, being 3.0 per cent. of the total, as compared with 2.2 per cent. last year.

Of the 1,157 births, 590 were males and 567 females.

The average number of births registered per year in the ten-year period 1897-1906 is 1,170, whilst the average yearly rate for that period is 34.0.

According to statistics, forwarded by Dr. Hill, the rate for the Administrative County of Durham is 34.8, as compared with 35.2 last year, whilst for the period 1897-1906 the rate is 35.3. For England and Wales the birth-rate is the lowest yet recorded, being 26.3; for the great towns it is 27.0, and for the smaller towns 25.7.

In the following table is shown the average yearly birth-rates in Jarrow since 1871:—

Birth-Rates (Jarrow) per 1,000 of the estimated population.

Mean, 1871-80	...	...	...	...	...	45.2
„ 1881-90	...	...	...	...	...	40.3
„ 1891-1900	...	...	...	...	...	34.7
1901	...	...	...	...	...	34.1
1902	...	...	...	...	...	36.0
1903	...	...	...	...	...	34.7
1904	...	...	...	...	...	31.4
1905	...	...	...	...	...	32.6
1906	...	...	...	...	...	32.0
1907	...	...	...	...	...	33.3
Mean, 1897-1906	...	...	...	...	...	34.0

Deaths.—Including those at the Borough Hospital, Primrose Hill, there were 508 deaths registered as having occurred within the Borough. There were 57 deaths registered of residents which occurred in Institutions outside the Borough. There were 5 deaths of non-residents, which occurred, two at Harton Workhouse, two at the Floating Hospital, and one at Primrose Hill Hospital; deducting these, we have a total of 560 deaths, giving a death-rate of 16.1 per 1,000 of the population, as compared with 18.0 last year and 17.1 the year previous. As already mentioned, this is the lowest death-rate in the history of the Borough, the previous lowest rates being 16.4 in 1894, 16.8 in 1897, and 17.1 in 1888.

Sixty-three, or 11.1 per cent. of the deaths occurred in Public Institutions, these being Harton Workhouse, 51; Sedgefield Lunatic Asylum, 6; Primrose Hill Hospital, 3; Floating Hospital, Jarrow Slake, 2; Palmer Memorial Hospital, 1. With the exception of the Palmer Memorial and Floating Hospital, all the others are situated outside the Borough.

Of the 560 deaths, 298 were males and 262 females, a proportion of 1,137 males to every 1,000 females.

For the ten years previous—1897-1906—the average number of deaths has been 644, whilst the average death-rate is 18.7

For the County the death-rate is 17.0, as compared with 17.5 last year, and 17.9 for the period 1897-1906.

For England and Wales the rate is 15.0, for the large towns 15.4 and for the smaller towns 14.5.

Our average death-rates since 1871 are shown in the following table:—

Death-Rates (Jarrow) per 1,000 of the estimated population.

Mean, 1871-80	...	...	...	...	...	23.9
„ 1881-90	...	...	...	...	...	21.1
„ 1891-1900	...	...	...	...	...	19.4
1901	...	...	...	...	...	19.1
1902	..	...	...	...	...	19.7
1903	...	...	...	...	...	17.7
1904	...	...	...	...	...	18.6
1905	...	...	...	...	...	17.1
1906	...	...	...	...	...	18.0
1907	...	...	...	...	...	16.1
Mean, 1894-1906	...	...	...	...	...	18.7

Coroner's Inquests were held in 27 instances, equal to 4.7 per cent. of the total deaths, as compared with 30, last year, giving a percentage of 4.8.

Uncertified Deaths.—There were 36 or 6.4 per cent. of the deaths returned as uncertified, mostly, if not all, upon informal certificates given by a medical man. Of the 36 uncertified deaths 23 were in infants under one year.

The Natural Increase of the Population, or the number of births in excess of the deaths is 595, as compared with 485 last year and 538 the year previous.

The quarterly death-rates during the year are shown in the following table.

Quarterly Death Rates per 1,000 of the Population. (Jarrow).

	Total Death-rate.	Zymotic Death-rate.	Phthisis Death-rate.	Disease of Respiratory System excluding Phthisis Death-rate.	Infantile Mortality rate.
First Quarter	19.59	1.61	1.95	5.41	131
Second Quarter	16.36	0.34	2.30	3.91	116
Third Quarter	11.98	0.92	0.57	1.84	101
Fourth Quarter	16.59	0.69	1.26	4.03	141
Year	16.13	0.89	1.52	3.80	121

It will be observed that the general death-rate was lowest in the third quarter of the year, a rather unusual occurrence, and was highest during the first quarter. The Zymotic mortality varied from .34 in the second quarter to 1.61 in the first quarter, during which period almost 50 per cent. of our total zymotic mortality for the year occurred. From Phthisis the death-rate was lowest in the third quarter and highest in the second quarter of the year. From disease of the respiratory system, excluding Phthisis, the mortality was highest in the first and last quarters, and lowest in the third. The Infantile Mortality rate varied from 101 in the third to 141 in the fourth quarter.

Infantile Mortality.—There were 141 deaths registered of infants under one year of age, being 25.1 per cent. of the total deaths, as compared with 165 last year, giving a percentage of 26.4. There were 214 deaths in children under five years of age, equal to 38.2 per cent. of the total, as compared with 271 last year, with a percentage of 43.4.

The Infantile Mortality Rate, or the number of deaths under one year, to every 1,000 registered births, is 121, the lowest on record for the Borough. Last year the rate was 148. For the

previous ten years, the average **number** of deaths in infants under one year of age is 182, whilst the average **Rate** for the period is 151. For the County the rate is 136, the average rate for the previous ten years being 163.

For England and Wales the rate is 118, for the great towns 127, and for the smaller towns 122.

The following table shows our average Infantile Mortality Rates since 1871.

Infantile Mortality Rates (Jarrow).				
Mean, 1871-80	...	...	...	175
„ 1881-90	...	...	...	152
„ 1891-1900	...	...	...	158
1901	...	...	...	158
1902	...	...	...	145
1903	...	...	...	151
1904	..	...	...	154
1905	...	...	...	143
1906	...	...	...	148
1907	...	...	...	121
Mean, 1897-1906	...	...	...	154

In the following table the principal causes of death in infants under one year of age are shown:—

Causes of Death in Infants under one year of age (Jarrow).

Diarrhœa	...	...	...	...	11
(including Gastritis, Enteritis, etc.)					
Whooping Cough	...	...	...	...	1—12
Premature Birth	...	...	...	...	29
Congenital Debility, etc.	...	...	...	...	28
Pneumonia	...	..	...	...	22
Bronchitis	...	...	...	...	14
Convulsions	...	...	...	...	15
Marasmus	...	...	...	...	4
All other causes	...	...	...	...	17—129

141

As compared with last year, there are 21 less deaths in infants under one year. Last year there were 32 Zymotic deaths, this year there are only 12. There were 41 deaths from Premature Birth last year, as against 29 this year. Of the total infantile

deaths this year no less than 40 per cent. were due to Premature Birth and Congenital Debility, the number of deaths from each being practically the same. From Inflammatory disease of the lungs, there were 36 deaths, practically one-fourth of the whole, showing that 25 out of every 100 children died either of Bronchitis or Pneumonia. I think a large part of this mortality could be obviated by more care and thoughtfulness on the part of the parents, especially as to the unsuitable hours and weather conditions to which infants are only too often carelessly exposed.

Of the 22 deaths from Pneumonia, 6 only occurred in children under 3 months, the remainder occurring from the fifth month onwards, and increasing in number each month, until at the age period 11—12 months we have five deaths from this cause. With regard to Bronchitis the heavier mortality occurs earlier in life. Out of the 14 deaths from this cause, only 2 occurred during the first month, whilst in the age period 1—4 months no less than 8 occurred. I think this clearly shows that during the first month, whilst the child is practically kept indoors, but little mortality occurs; after this, when the child commences to be taken out and about, **under conditions and circumstances inimical to health**, we at once see an increase in the mortality from these diseases.

Fifty-five or 39 per cent. of the total 141 died before reaching the age of one month. Twenty-three of the total were returned as uncertified.

For fuller and more detailed information under this heading see Table V. in Appendix.

In the following table the deaths and death-rates for the various Wards are shown in detail. Deaths of residents occurring outside the Borough, are taken as having occurred in the Ward in which the patient resided previous to removal.

Births and Deaths, with respective Rates, according to Wards (Jarrow) 1907.

Ward.	Estimated Population.	Births and Birth-rate.	Total Deaths and Death-rate.	Zymotic Deaths and Death-rate.	Phthisis Deaths and Death-rate.	Deaths from Disease of the Respiratory System excluding Phthisis, & Death-rate.	Deaths of Infants under One Year with Percentage Mortality.	Infantile Mortality rate.
North	5020	189 37.6	97 19.3	7 1.3	12 2.3	22 4.3	33 34.0	174
South	6980	259 37.1	108 15.4	5 0.7	7 1.0	20 2.8	18 16.6	69
East	5100	165 32.3	106 20.7	8 1.5	5 0.9	33 6.4	34 32.0	206
West	6050	193 31.9	86 14.2	2 0.2	9 1.4	21 3.4	19 22.0	98
Grange	5690	160 28.0	60 10.5	3 0.5	4 0.7	11 1.9	13 21.6	81
Central	5860	191 32.5	103 17.5	6 1.0	16 2.7	25 4.2	24 23.3	125
Borough	34700	1157 33.3	560 16.1	31 0.8	53 1.5	132 3.8	141 25.1	121

By referring to the above table, it will be seen that the **Birth-Rate**, which for the Borough is 33.3 per 1,000 of the population, varied from 37.6 in the North Ward, to 28.0 in the Grange. For a satisfactory comparison of the health conditions prevailing throughout the Borough, it will be as well to take the different causes of death separately, and compare the mortality occurring from each in the various Wards. Taking the **Total Death-Rate**, which for the Borough is 16.1 per 1,000 of the population, it is shown that the rate for the East Ward is as high as 20.7, whilst that for the Grange Ward is as low as 10.5; next to the Grange, from a health point of view, being the West, 14.2, followed by the South, 15.4, Central, 17.5, and North, 19.3. As regards

Zymotic Disease, the **Zymotic Death-Rate** for the Borough is 0.8. Here again the East Ward shows most unfavourably, the rate there being 1.5, as contrasted with the West Ward, where the rate is only 0.2, next to the West, being the Grange, with a rate of 0.5; South, 0.7; Central, 1.0; and North, 1.3. The **Phthisis Death-Rate** for the Borough is 1.5, and this rate varies from 2.7 in the Central Ward, to 0.7 in the Grange, 0.9 in the East, 1.0 in the South, 1.4 in the West, and 2.3 in the North.

The **Death-Rate for Diseases of the Respiratory System, excluding Phthisis**, is for the Borough 3.8, but in the East Ward the rate is as high as 6.4, and in the Grange as low as 1.9, the rate for the other Wards being: North 4.3, Central 4.2, West 3.4, South 2.8. Taking the **Percentage Mortality of Infants under one year**, which for the Borough is 25, showing that out of every 100 deaths, occurring in the Borough, 25 are of infants under one year. Comparing this with what occurs in the various Wards it is seen that 34 per 100 die in the North Ward, 32 in the East, 23 in the Central, 22 in the West, 21 in the Grange, and 16 in the South Ward.

The **Infantile Mortality Rate** for the Borough is 121, and this varies from the excessively high rate of 206 in the East Ward, to the remarkably low one of 69 in the South; that for the other Wards being: Grange, 81; West, 98; Central, 125; North, 174.

Comparing the average death-rates occurring in each Ward, to the East must be assigned the unenviable position of being the most unhealthy, closely followed by the North. The Central comes next, but taken on the whole its condition may be considered as being very satisfactory, especially when one remembers that a few years back—in 1901 its death-rate was 27.7—it was as regards health conditions the very worst in the town. Taken as a whole the Grange occupies the premier position, that of the West and South being about equal. Last year and for two or three years previous, the North Ward had been adjudged the most unhealthy.

Before dealing with the principal fatal diseases in detail, the following table is given as a means of comparison of these for the last three years.

FATAL DISEASES, 1904-6.

DEATHS.	1906	1907	1905
All Causes	593	624	560
The Seven Principal Zymotic Diseases ...	54	78	31
Smallpox	1	...	...
Measles	11	21	2
Scarlet Fever	1	1	4
Diphtheria, including Membranous Croup	4	8	4
Whooping Cough	10	15	2
"Fever"	5	6	4
Diarrhœa	22	27	15
Septic Diseases	10	7	12
Phthisis	44	55	53
Bronchitis, Pneumonia, &c. ...	144	116	132
Heart Disease	47	52	45
Injuries	17	25	22
All Other Causes	277	291	265

Pneumonia.—This disease is again the most fatal in the Borough, accounting for 81 deaths, equal to 14 per cent. or one-seventh of the whole. This is an extraordinarily heavy mortality. Last year we had 68 deaths from this cause, equal to one-ninth of the whole. The incidence of the disease at the various age periods is as follows:—Under one year, 22; one and under five years, 28; 5—15 years, 8; 15—25 years, nil; 25—65 years, 16; over 65 years, 7, showing that of the total 81 deaths no less than 50, or 61 per cent. occurred in children under five years of age. I have already pointed out, in dealing with Infantile Mortality, that in my opinion a very large proportion of these deaths could be avoided, and the remarks there made apply equally, if not more so, to the mortality from this disease occurring in children between one and five years. Considering the nature of a large part of the employment here, and the great extremes of heat and cold and varying weather conditions to which a very large number of our workers are exposed, the mortality in the working

life period 15—65 years can not be considered as excessive. The Ward mortality is as follows:—East, 23; Central, 16; North, 13; South, 13; West, 12; Grange, 4.

Tubercular Disease.—The mortality resulting from Tubercle in its various forms almost equals that of Pneumonia, there being 79 deaths due to it. Of these deaths 53 were due to **Phthisis** and 26 to various other forms of the disease. Last year Tubercle, caused 83 deaths. The ages at death were as follows:—Under one year, 2; 1—5 years, 9; 5—15 years, 19; 15—25 years, 15; 25—65 years, 32; 65 years and upwards, 2; whilst the Ward mortality was:—Central, 20; North, 18; South, 16; West, 12; East, 7; Grange, 6.

The unsatisfactory results of the Voluntary Notification of Phthisis has been previously referred to in these reports, and need only be again mentioned to be emphasized. During the year there were only 14 notifications received. There were four cases admitted to Stanhope Sanatorium.

Heart Disease.—There were 45 deaths as compared with 50 last year. All the deaths, except four, occurred in persons over 25 years of age. The Ward mortality is as follows:—South, 13; Grange, 9; East, 8; North, 6; Central, 5; West, 4.

Bronchitis.—Thirty-seven deaths were registered from this cause, 14 of which occurred in Infants under one year, 13 in the age period 25—65 years, and 9 in persons over 65 years of age. The Ward mortality was as follows:—Central, 9; North, 8; West, 7; South, 5; East and Grange, 4 each.

Last year there were 38 deaths.

Premature Birth.—There were 29 deaths, 23 of which died before the first week of life, 3 before reaching one month, and 3 between one and two months. The following is the Ward mortality:—South, 7; West and Grange, 6 each; North, 5; Central, 4; East, 1.

Congenital Debility.—There were 23 deaths from this cause, 13 of which died under three weeks of age. The Ward mortality

is:—East, 8; North, 6; Central, 4; West and Grange, 2 each; South, 1.

Apoplexy.—Under this heading is included deaths from Hemiplegia and Cerebral Hæmorrhage. There were 24 deaths as compared with 29 last year. Fifteen of the deaths occurred in persons over 65 years of age. The Ward mortality was as follows:—West, 7; North-East and Central, 4 each; Grange, 3; South, 2.

Accidents.—Under this is included deaths from violence of all sorts, such as drowning, burning, overlaying, etc. There were 22 deaths, as compared with 25 last year.

Cancer.—Under this is included deaths from all forms of malignant disease. There were 18 deaths distributed among the various Wards as follows:—West, 7; Grange, 3; North, South, East and Central, 2 each. Last year there were 32 deaths from this cause.

For further information as to the other various causes of death see Table IV. in Appendix.

ZYMOTIC DISEASE.

Infectious Diseases Notification Act.—There were 142 cases of Infectious disease notified to the Health Office, as compared with 116 last year, and 199 the year previous. There were fewer cases notified last year than in any other year, with the exception of 1880. As compared with last year there have been 17 more cases of Scarlet Fever, 13 more of Diphtheria, 8 more of Erysipelas and 6 more of Phthisis, whilst there have been 9 less of Enteric Fever, 7 less of Membranous Croup, and 2 less of Continued Fever.

For further details see Table III. and VI. in Appendix.

Zymotic Deaths.—There were 31 deaths registered from Zymotic disease, these being due—15 to Diarrhœa, 4 each to Enteric Fever, Scarlet Fever and Diphtheria, including Membranous Croup, and 2 each to Measles and Whooping Cough. These 31 deaths represent a Zymotic death-rate of .8 per 1,000 of our population per annum, which, as already pointed out, is the lowest Zymotic rate we ever have had in the Borough. Not only is it the lowest, but it is lower by nearly one-half than any previous Zymotic rate. The previous records for our Zymotic rate have been—1.5 in 1905 and 1903, 1.7 in 1897, 1.8 in 1900 and 2.1 in 1890. Last year the rate was 2.2. For the County the rate is 1.9 as compared with 2.4 the previous year.

For England and Wales the rate is 1.2, for the large towns 1.5 and for the smaller towns 1.2.

In the following tables are shown the deaths occurring from Zymotic disease throughout the year and the wards in which they occurred.

Zymotic Diseases—Deaths from and the Months in which they occurred., 1907- Jarrow.

Month	Diarrhœa	Measles.	Whooping Cough.	"Fever."	Diphtheria including Membranous Croup	Scarlet Fever.	Smallpox.	Total
Jan.	2	1	...	1	...	2	...	6
Feb.	1	1	..	2	1	.	..	5
March	2	...	...	...	1	...	...	3
April	...	...	...	...	...	...	...	...
May	1	...	...	...	1	1	..	3
June	...	...	...	...	...	..	...	...
July	...	...	1	...	1	..	..	2
August	3	...	...	...	..	..	...	3
Sept.	1	...	...	1	..	1	..	3
October	4	...	1	...	..	...	...	5
Nov.	...	...	...	...	..	...	...	...
Dec.	1	...	...	...	...	..	...	1
Year	15	2	2	4	4	4	...	31

Zymotic Deaths ; showing Wards in which they occurred.

Diseases.	North Ward	South Ward	East Ward.	West Ward.	Grange Ward.	Central Ward.	Total
Diarrhoea ...	4	...	5	1	1	4	15
Measles ...	...	...	...	1	1	...	2
Whooping Cough ...	1	...	1	...	...	...	2
Enteric Fever ...	...	3	..	...	1	...	4
Diphtheria & Membranous Croup ...	...	2	2	...	...	...	4
Scarlet Fever ...	2	..	..	...	...	2	4
Smallpox ..	.	...	...	...	...	..	...
Total ..	7	5	8	2	3	6	31

The above tables sufficiently explain themselves and require no comment beyond the fact that no less than one-third of the deaths from diarrhœa occurred in the first three months of the year, which is rather unusual.

Smallpox.—We have been quite free from this during the year.

Scarlet Fever.—There were 55 cases notified as compared with 38 last year and 67 the year previous. The disease was constantly present throughout the year, there being no month in which a case was not notified, though in July we had only one case reported; the highest number being in September, when we had 10 cases. The following are the monthly notifications:—January, 5; February, 3; March, 2; April, 4; May, 7; June, 7; July, 1; August, 3; September, 10; October, 1; November 5, December, 1. The Ward distribution was as follows:—South, 19; Grange, 12; North, 10; Central, 8; West, 5; East, 1. The immunity of the East Ward is rather remarkable, considering that as regards its health conditions it is the worst in the town. Of the 19 cases in the South Ward, no less than 12 occurred during the months of April, May and June. In the Grange Ward the disease was more evenly distributed throughout the

year, not more than two notifications having been received in any one month, and there being four months in which no cases at all were notified. In the North Ward also we had never more than two notifications per month and for some months none at all. There was no special incidence of the disease on any particular school, nor on any particular milk supply.

There were 41 cases removed to Hospital, equal to 74 per cent. of the total notified.

There were four deaths, equal to a death-rate of .11, as compared with .02 last year.

For the County the rate is .06, as compared with .08 last year.

Enteric Fever.—Of this disease, which until very recently was so prevalent, we had only nine cases notified, as compared with 18 last year and 34 the year previous. The small number this year constitutes another record. The cases occurred:—Three in January, two in October and one each in the months of May, July, September and December; the Ward distribution being—South, 4; West, 2; Grange, 2; North, 1; East and Central, nil. Of the four cases in the South Ward, three occurred in January in widely separated centres, and one in December.

Five of the cases were removed to Hospital.

There were four deaths, equal to a death-rate of .11, as compared with .17 last year.

Continued Fever.—There were two cases notified, as compared with four last year. The cases occurred one in July and one in December, and in the South and Grange Wards.

There were no deaths.

Typhus Fever.—We had no cases during the year, but owing to its prevalence in an adjoining district handbills were issued pointing out the precautions to be adopted against the disease, its symptoms, and the best method of dealing with it, should it become introduced.

The death-rate from "Fever," under which heading is included the three last diseases, is .11 as compared with .02 last

year. For the County the rate is .10 as compared with .22 last year.

Diphtheria and Membranous Croup.—There were 27 cases notified, 21 of Diphtheria and 6 of Membranous Croup. Last year there were 13 of Diphtheria and 8 of Membranous Croup. The cases occurred more or less sporadically throughout the year, August being the only month in which no case was notified. The highest number of cases notified in any one month was five in February. The following are the monthly notifications:—January, 1; February, 5; March, 4; April, 2; May, 3; June, 1; July, 3; August, nil; September, 2; October, 1; November, 1; December, 4. The Ward distribution was as follows:—South, 8; Grange, 7; West, 6; North, South and Central 2 each; the brunt of the disease falling upon the Wards in which it might be least expected. As showing the sporadic nature of the disease, it might be pointed out that in all these Wards there was at no time any approach to a serious outbreak, the cases appearing more or less intermittently throughout the year. Thus of the eight cases in the South Ward, we had one in February, two in March, one in April, one in May, one in June, one in July, and one in October. Similarly in the Grange Ward, we had two cases in February and one each in March, April, July, November and December. In the West Ward we had one each in May, July and September, and three in December.

The age attacks were as follows: 1—5 years, 11; 5—15 years, 12; 15—25 years, 1; 25—65 years, 3.

Of the 27 cases, 13 were in children of school-going age, who were distributed over seven schools, so that school life did not appear to have any marked influence. Similarly as regards the milk supply, there were eight sources of supply, on none of which was there any marked incidence.

There were four deaths, equal to a death-rate of .11 per 1,000

per annum as compared with .23 last year, the rate for the County being .20, the same as that of the previous year.

Diarrhœa.—There were 15 deaths from this cause as compared with 27 last year. It may be again pointed out that for infants under one year of age all deaths occurring from Gastritis, Enteritis, Muco-Enteritis, etc., are classified under the heading of Diarrhœa, this causing the discrepancy between the numbers given above and that appearing in Table IV. of Appendix. Of the 15 deaths, 8 were under one year of age; 5 from 1—5 years. and 2 over 65 years of age. Five of the deaths occurred in the East Ward, 4 each in the North and Central, and 1 each in the West and Grange; South nil.

The death-rate is .43, as compared with .77 last year. For the County the rate is .59, as compared with 1.41 last year.

Whooping Cough.—We had very little of this disease during the year, and the cases that occurred were mostly of a mild type. There were only 2 deaths, as compared with 15 last year. These deaths occurred in the North and South Wards during the months of July and October.

The death-rate is .05, as compared with .43 last year. For the County the rate is .32, as against .30 the previous year.

Measles.—We were also fortunate as regards Measles, there being only 2 deaths, as compared with 21 last year. These deaths occurred in January and February, and were the last of the epidemic which prevailed towards the latter part of the previous year. They occurred in the West and Grange Wards. We were threatened with a recrudescence of the disease in March, and as a consequence the Infant departments of the Grange and Bede Burn Road Schools were closed for one month from March 8th. This seemed to have checked its spread, as after this no more cases occurred and there was no further mortality.

The death-rate is .05, as compared with .60 the previous year. For the County the rate is .69, as against .16 the previous year.

Hospital.

The following table shows the admissions, recoveries and deaths, occurring at the Hospital:—

Disease.	Admitted.	Recovered.	Died.	Mortality per cent. of Admissions.
Scarlet Fever	41	40	1	2.43
Enteric Fever	6	4	2	33.3
Total	47	44	3	6.38

One of our Nurses, unfortunately, developed Enteric, but made a good recovery. She is included among the admissions.

GENERAL SANITARY WORK.

As shown by Mr Callis's Report, a very large amount of work has been gone through during the year. There have been 2,357 informal notices served for breaches of or in connection with the Public Health Acts, all of which were remedied or attended to. The most serious of these were in connection with Structural Defects in dwelling-houses, for which 131 notices were served, and in connection with defective House Drainage, for which 302 notices were given. The number of formal notices given by order of the Sanitary Authority was 137, of which 62 were in connection with structural house defects and defective yard paving, and 6 for insanitary ashpits.

Insanitary Property.—Apart from the various minor defects which constantly occur, and in old property too often recur, and which are referred to in Mr. Callis's Report, we had in one instance to take proceedings before the magistrates as regards a block of property in High Street in which there were serious structural defects, principally as regards box closets, in themselves defective,

and bad closet accommodation. There was practically no defence, and the work was ordered to be done to the satisfaction of the Authority within 14 days, or a penalty of 20/- per day afterwards. Needless to say the work was immediately carried out to our satisfaction. Under the Housing of the Working Classes Act, notices were served against 10 dwellings, which were structurally altered and made habitable. Regarding the properties reported upon last year, in a large number of which serious dilapidations and grave defects were pointed out; these, with one exception, have all been attended to and the houses very much improved. The exception mentioned are the houses in Walter Street, the cellar dwellings of which were closed last year. The whole block has now been permanently closed.

Sanitary Inspection.—Over properties such as these constant and increasing supervision by the Sanitary Authority is absolutely necessary. This with our present staff is quite impossible, and I should urge the Council to bring our staff up to its previous strength, either by the addition of an Assistant Inspector, or by putting into effect the resolution already carried by the Council of appointing a Lady Health Visitor and Inspector combined. To carry out the very many multitudinous Sanitary duties necessary for the health and well-being of the Town and its inhabitants two Inspectors are none too many for our requirements.

Privy-Middens.—Fifty-two of these, and 4 defective box closets, were removed, and 43 box closets and 9 water closets were substituted. There are now very few privy-middens in the Borough—50 or so in all, and during the ensuing year we intend having them all removed, and some sanitary convenience substituted; as the time has now come when instead of being looked upon as a Sanitary convenience, they can only be considered as a dangerous nuisance. Knowing the part played by flies in the propagation of disease, and the ready access flies have to these, each one of them must be regarded as a standing menace to the health of the Borough. It is of considerable import that along with the lessened number of privy-middens the number of cases of Enteric Fever,

and the number of deaths from Diarrhœa have also decreased.

With the increased powers given by the Public Health Acts Amendment Act, 1907, which I trust will be adopted, an end should be made of these without further delay.

Defective Yard Paving.—The removal of these has been gone on with steadily for a number of years, so that at the present time their number is very small indeed, and in the course of a year or two they ought to be entirely done away with. During the year 82 were removed and cemented yards substituted.

Back Streets.—Between badly bricked yards and badly bricked or cobbled back streets there is not much difference, and from a health point of view there is not much advantage to be derived from cemented yards, unless the streets or lanes adjoining are put in an equally satisfactory condition. I should impress again the necessity of macadamising all lanes, more especially in those districts, where the only entrance to the house is by way of the back street, and where, in such circumstances, the streets are as much used as the yards by children and others living in the neighbourhood. There are a large number which require attention, and which if this were done the health conditions would be very much improved.

Scavenging.—This has been done in a very satisfactory manner throughout the year. Macadamising of our back streets would render this work much more easy and much more thorough.

Removal of Refuse Excrement.—This continues to be carried out very satisfactorily, the closets being emptied weekly, and the ash-pits, of which there are now very few, monthly. It is disposed of at sea.

Public Baths and Wash-houses.—These have not yet been commenced with.

Pollution of River Don.—Nothing definite has been done in this matter during the year, although it is still under consideration.

For actions under Foods and Drugs Act; for precautions against Infectious Diseases; for Inspection of Lodging Houses, Dairies, Slaughter Houses, etc., etc., see Inspector's Report.

FACTORY AND WORKSHOPS ACT, 1901.

There are 26 Workshops on the Register, as compared with 25 last year. These have all been visited and inspected. In only one instance was any defect found. This was with regard to deficient ventilation in a laundry, and was at once remedied. There are only 4 home workers on our lists, these being engaged in making wearing apparel, and very often working for two or more employers. There are ten employers who give out home work. The houses of the home workers were visited during the year and found in a satisfactory condition.

TABLE 1.—Vital Statistics of whole District during 1907 and previous years.

Year. 1	Population estimated to Middle of each Year. 2	Births.		Deaths under One Year of Age.		Deaths at all Ages. Total.		Deaths in Public Institutions.	Deaths of Non-residents registered in District.	Deaths of residents registered beyond District.	Deaths at all Ages. Nett.	
		No.	Rate.*	No.	Rate per 1,000 Births registered.	No.	Rate.*				No.	Rate.*
1897	34047	1192	35.0	175	146	550	16.1	8	11	35	574	16.8
1898	34109	1183	34.6	207	174	615	18.0	16	10	59	664	19.4
1899	34169	1202	35.1	203	168	676	19.7	14	12	38	702	20.5
1900	34227	1185	34.6	189	159	645	18.8	15	2	49	692	20.2
1901	34310	1170	34.1	185	158	612	17.8	12	1	47	658	19.1
1902	34400	1241	36.0	181	145	648	18.8	15	4	36	680	19.7
1903	34500	1200	34.7	185	154	570	16.5	12	2	45	613	17.7
1904	34600	1087	31.4	168	154	595	17.1	12	5	56	646	18.6
1905	34600	1131	32.6	162	143	530	15.3	1	1	64	593	17.1
1906	34625	1109	32.0	165	148	572	17.2	7	4	56	624	18.0
Averages for years 1897-1906.	34358	1170	34.0	182	154	601	17.5	11	5	48	644	18.7
1907	34700	1157	33.3	141	121	508	14.6	3	2	60	560	16.1

*Rates calculated per 1 000 of estimated population.

Area of District in acres
(exclusive of area covered by water). } 906.

Total Population at all ages, 34,294.....
Number of inhabited houses, 4,355.....
Average number of persons per house, 5.03 } At Census of 1901.

TABLE II — Vital Statistics of separate Localities in 1907 and previous years

Names of Localities.	North Ward.				South Ward.				East Ward.				West Ward.				Central Ward.				Grange Ward.				The Borough.			
	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
1897	5,722		94	27	6,152		76	2	5,216		111	43	5,974		99	22	621		141	40	5,132		53	15	5,407		111	175
1898	5,726		131	16	6,280		95	35	5,216		126	32	5,981		103	35	614		153	41	5,202		56	16	5,410		111	207
1899	5,766		154	18	6,438		113	39	5,136		108	36	5,988		113	32	6,069		137	32	5,332		75	28	5,169		111	203
1900	5,110		127	28	6,666		96	21	5,136		131	26	5,995		118	27	5,996		143	45	5,404		98	29	5,127		692	189
1901	5,076		118	32	6,710		117	34	5,130		102	28	6,006		101	33	5,955		152	42	5,483		68	16	5,4310		658	156
1902	5,020		144	41	6,841		97	3	5,100		88	31	6,020		121	42	5,822		133	29	5,585		81	15	5,440		680	181
1903	5,020		108	36	6,890		101	30	5,100		104	32	6,030		126	41	5,860		111	31	5,600		78	16	5,400		613	185
1904	5,021		128	40	6,930		123	40	5,100		104	32	6,050		108	23	5,860		114	19	5,649		69	14	5,460		645	168
1905	5,021		117	37	6,930		267	118	5,100		88	23	6,050		108	24	5,860		104	21	5,649		10	58	5,460		593	162
1906	5,020		116	37	6,930		269	111	5,100		111	35	6,050		179	23	5,860		174	29	5,605		123	63	5,4625		621	185
Averages of Years 1897 to 1906	5,092		123	38	5,606		105	32	5,143		105	31	6,014		109	29	5,964		130	32	5,477		70	17	5,4358		644	181
1907	5,020		189	97	6,980		269	108	5,100		106	34	6,050		193	86	5,860		191	103	5,300		140	60	5,4470		1,157	560

TABLE III.—Cases of Infectious Diseases notified during the Year 1907.

Notifiable Disease.	Cases notified in Whole District.						Total Cases notified in each Locality							No. of Cases of removed to Hospital from each Locality.						
	At all Ages.	At Ages—Years.					North Ward.	South Ward.	East Ward.	West Ward.	Grange Ward.	Central Ward.	Total.	North Ward.	South Ward.	East Ward.	West Ward.	Grange Ward.	Central Ward.	Total.
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.															65 and upwards
Small-pox .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria, including	27	11	12	1	3	..	8	2	6	7	2	27	..	..	..	..	..	..	..	..
Membranous Croup	35	1	3	1	26	..	5	3	5	10	6	35	..	..	..	..	..	..	..	..
Erysipelas	55	29	22	2	1	..	10	19	1	5	12	8	55	7	13	..	6	9	7	41
Scarlet fever	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Typhus fever	9	1	1	2	5	..	1	4	..	2	2	..	9	1	2	..	1	1	..	6
Enteric fever .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Relapsing fever	2	1	..	..	1	..	..	1	..	..	1	2	..	..	..	..	..	..	..	..
Continued fever .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal fever .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Plague .....	..	..	..	..	2	..	10	..	..	2	1	..	14	..	..	..	..	..	..	..
Phthisis	14	..	2	10	2	..	10	..	1	2	1	..	..	..	..	..	..	..	..	..
Totals	142	2	43	40	16	38	29	37	7	20	33	16	142	8	15	..	6	10	7	46

Isolation Hospital—Primrose Hill Hospital situated a short distance outside Borough.

TABLE V.—Infantile Mortality during the Year 1907. Deaths from Stated Causes in Weeks and Months under One Year of Age.

CAUSE OF DEATH.		Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under one Year.
All Causes.	{ Certified ... Uncertified ...	30 8	5 1	6 ..	4 1	45 10	19 4	12 4	8 1	2 ..	6 1	3 2	4 ..	7 1	4 ..	3 ..	5 ..	118 23
Common Infectious Diseases.	{ Smallpox ... Chicken-pox ... Measles ... Scarlet Fever ... Diphtheria : Croup Whooping Cough	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	{ Diarrhoea, all forms Enteritis not Tuberculous	..	..	..	..	..	1	1	1	..	1	..	..	1	..	..	..	7
	{ Gastritis, Gastro- intestinal Catarrh	..	..	..	..	..	..	2	..	1	..	..	..	..	1	..	..	4

Wasting Diseases.	{ Premature Birth Congenital Defects Injury at Birth Want of Breast Milk Atrophy, Debility, Marasmus	23 2 10	1 1 1	1 2	1	26 3 13	3 1 2	..	..	..	..	..	1	..	..	..	..	29 5 1 .. 23
	{ Tuberculous Meningitis. Tuberculous Peritonitis: Tabes Mesenterica Other Tuberculous Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	{ Erysipelas Syphilis Rickets Meningitis not Tuberculous	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1 3 ..
	{ Convulsions Bronchitis Laryngitis Pneumonia Suffocating, overlaying Other Causes	..	2	1 1 1 1 ..	1 1 1 1 ..	7 2 .. 3 ..	..	1 2 2 .. 5	..	..	2 .. 1	1 1	1 1 .. 2 ..	1 1 .. 3 ..	1 1 .. 2 ..	..	..	3 15 14 1 22 2 8
		38	6	6	5	55	23	16	9	2	7	5	4	8	4	3	5	141

District or sub-division of Jarrow.

Population
Estimated to middle of 1907
34,700

Births in the year { legitimate ... 1,122

Deaths from all Causes at All Ages 560.

Deaths from all Causes at All Ages 560.

TABLE IV.—Causes of, and Ages at, Death during Year 1906.

Causes of Death.	Deaths in whole District at subjoined Ages.							Deaths in Localities (at all Ages).							Deaths in Public Institutions in District.
	All ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	North Ward	South Ward	East Ward	West Ward	Grange Ward	Central Ward.	Total.	
Small-pox .. ..	..	..	1	..	..	..	..	..	..	..	1	1	..	..	..
Measles	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..
Scarlet fever ..	4	..	4	..	..	..	..	..	..	..	..	..	..	..	..
Whooping-cough ..	2	1	1	..	..	..	..	1	..	..	..	..	..	..	..
Diphtheria and membranous croup ..	4	..	3	1	..	..	..	..	2	2	..	..	..	..	..
Croup .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Fever { Typhus .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
{ Enteric	4	..	..	..	1	3	..	..	3	..	..	1	..	..	1
{ Other continued ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Epidemic influenza ..	8	..	..	2	1	2	3	..	2	2	4	..	..	..	..
Cholera .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Plague .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhœa	18	11	5	..	..	..	2	5	1	5	1	1	5	..	..
Enteritis	1	..	1	..	..	..	..	..	..	1	..	..	..	..	..
Puerperal Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas	2	1	..	..	..	..	1	..	..	..	..	1	1	..	..
Other septic diseases ..	10	..	4	..	..	4	2	..	..	..	1	5	2	..	..
Phthisis	53	..	2	6	14	25	2	12	7	5	9	4	16	..	..
Other tubercular diseases ..	26	2	7	13	1	3	..	6	9	2	3	2	4	..	..
Cancer, malignant diseases ..	18	..	..	..	..	11	7	2	2	2	7	3	2	..	..
Bronchitis	37	14	1	..	..	13	9	8	5	4	7	4	9	..	..
Pneumonia	81	22	28	8	..	16	7	13	13	23	12	4	16	..	1
Pleurisy .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other diseases of Respiratory organs ..	14	1	2	..	..	6	5	1	2	6	2	3	..	..	..
Alcoholism .. ..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..
Cirrhosis of liver ..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Venereal diseases ..	4	3	1	..	..	..	..	1	1	..	1	..	1	..	..
Premature birth ..	29	29	..	..	..	..	..	5	7	1	6	6	4	..	..
Diseases and accidents of parturition. ..	3	..	..	..	..	3	..	..	1	1	1	..	..	..	..
Heart Diseases	45	..	1	2	1	24	17	6	13	8	4	9	5	..	..
Accidents	22	4	3	3	3	5	4	5	4	6	1	1	5	..	1
Suicides	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..
Rhenmatic fever ..	3	..	..	1	..	2	..	2	..	..	..	..	1	..	..
Congenital Debility ..	23	23	..	..	..	..	..	6	1	8	2	2	4	..	..
Convulsions	15	15	..	..	..	..	..	4	1	3	4	..	3	..	..
Apoplexy, Hemiplegia and Cerebral Hemorrhage	24	..	..	..	..	9	15	4	2	4	7	3	4	..	..
Marasmus	5	4	1	..	..	..	..	..	1	2	..	1	1	..	..
Meningitis	3	3	..	..	..	..	..	..	2	1	..	..	..	..	..
All other causes ..	98	8	8	1	4	43	34	16	26	17	12	9	18	..	..
All causes	560	141	73	35	25	175	108	97	108	106	86	60	103	..	3

TABLE VI.—Deaths occurring during the year 1907, in the Jarrow Urban Sanitary District, classified according to ages, disease, and the months in which they occurred.

AGES AT DEATH.						Deaths at all Ages.	MONTHS.	FATAL DISEASES.																						
Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 upwards.			Smallpox.	Scarlet Fever.	Diphtheria.	Membranous Croup.	Continued Fevers.			Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea and Dysentery.	Rheumatic Fever.	Phtisis.	Bronchitis, Pleurisy, and Pneumonia.	Heart Disease.	Tubercular Disease other than Phtisis.	Injuries.	All other Diseases.	Total.	
21	16	4	6	12	13	72	January...						1					1		2			7	22	5	3	4	25	72	
7	8	3	1	21	9	49	February...			1		2						1		1				5	14	5	2	5	15	49
9	5	3	3	16	13	40	March...				1													5	3	4	1	20	49	
10	2	3	2	19	10	49	April...																7	9	2	3	1	37	49	
17	8	5	2	10	11	53	May...			1													8	13	5	3	2	22	53	
9	4	5	3	12	7	40	June...																	6	2	2	1	19	40	
0	1	5	...	7	10	32	July...			1														4	4	2	2	1	19	32
12	2	2	...	3	3	32	August...											1						6	3	3	3	13	32	
10	2	3	3	18	7	40	September...						1											7	2	3	2	26	40	
12	0	4	...	18	13	56	October...											1		1	4		5	8	2	3	2	24	56	
15	6	3	...	15	8	47	November...																	12	2	3	3	28	47	
10	7	1	5	14	4	41	December...																	2	2	1	2	22	41	
41	73	38	25	175	108	560	Year...		4	3	1		4				2	2	2	15	8	53	118	45	26	22	260	560		

TABLE VII.—Notification of Cases of Infectious Disease, received at the
Health Office during 1907

DISEASE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Smallpox ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever...	5	3	2	4	7	7	1	3	10	4	5	4	55
Enteric Fever..	3	...	...	...	1	...	1	...	1	2	...	1	9
Continued Fever	...	...	...	...	...	...	...	...	...	...	...	...	2
Diphtheria ...	1	5	3	2	...	1	3	...	1	...	1	4	21
Membranous Croup	...	...	1	...	3	...	...	...	1	1	...	...	6
Erysipelas ...	1	3	1	2	5	3	3	2	3	4	3	5	35
Phthisis ...	...	1	4	1	...	...	1	...	...	2	4	1	14
Total	10	12	11	9	16	11	10	5	16	13	13	16	142

**ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH FOR
1907, FOR THE BOROUGH OF JARROW.**

FACTORIES, WORKSHOPS, LAUNDRIES, WORKPLACES & HOMEWORK.

1.—INSPECTION. Including Inspections made by Sanitary
Inspectors or Inspectors of Nuisances.

Premises.	Number of		
	Inspections	Written Notices	Prosecut'ns
FACTORIES (Including Factory Laundries).	12	...	...
WORKSHOPS (Including Workshop Laundries)	30	...	...
Total	42	...	...

2.—DEFECTS FOUND.

Particulars.	Number of Defects.			Number of Prosec'ns.
	Found.	Rem'ied	Referred to H.M. Inspector.	
Nuisances under the Public Health Act.				
Want of Ventilation	I	I	...	...
Sanitary Accommodations—				
Insufficient ... ..	...	...	...	...
Unsuitable or defective ... ..	...	...	...	...
Not separate for sexes ... ..	...	...	...	...
Total	I	I	...	...

3.—HOMEWORK.

Nature of Work.	Outworkers' Lists, Section 107.			Number of Inspection of Out- workers prem- ises.
	Once in the year.		Numbers of Addresses of Out- workers forwarded to other Councils.	
	Lists.	Outworkers.		
Wearing Apparel— making, &c. ...	10	6		8

4.—REGISTERED WORKSHOPS.

Class.	Number.
Workshops on the Register (s. 131) at the end of 1906	
Tailoring and Millinery... ..	12
Bakehouses	8
Others	6
Total number of Workshops on Register	26

**I.—Summary of Work done in the Inspector of Nuisances'
Department during the Year 1907, in the Urban
Sanitary District of Jarrow.**

I.—PUBLIC HEALTH ACTS.	No. of Informal Written Notices by Inspector.	No. of Formal Notices by order of Authority.	No. of Nuisances abated after Notice.	General Remarks.
Dwelling-houses and Schools—				
Foul Conditions	10	..	10	Structural Defects. — Proceedings were taken against the owner of 62 houses to enforce repairs. The magistrates ordered the repairs to be carried out under a penalty of 20s per day after 14 days. The Defendant paying Costs.
Structural Defects	131	62	131	
Overcrowding .. .. .	...	..	..
Lodging-houses, To Linewash etc.	30	..	30	Lodging Houses.—These houses are regularly visited and all found in fair condition throughout, several very clean indeed.
Dairies and Milkshops, all kept under observation and found in order .. .. .	...	..	...
Cowsheds	4	..	4	
Bakehouses, seven in number, all inspected and found in order ...	14	...	14	Dairies and Milkshops.—These have been visited and found to comply with regulations. Bake-houses have been duly inspected and found clean and in accordance with Byelaws.
Slaughter-houses To Linewash	50	..	50	
Ashpits and Privies	100	6	50	
Deposits of Refuse and Manure	68	..	68	Slaughterhouses.—Have been inspected and found clean and in compliance Byelaws.
Water Closets	2	..	2	
Defective Brick Yard Paving— all cemented	82	62	82	
House Drainage—				Privy Middens.—52 Privy Middens and 4 bad boxes have been removed and 43 box-closets and 9 water closets substituted. Laundries—were found clean and efficiently ventilated.
Defective Traps	10	...	10	
No disconnection from Sewers	1	..	1	
Other Faults	291	3	291	Under the item of other Nuisances 47 were sent to re-cement bad box-closets out. 350 passages staircases and other places were were limewashed. 79 Closets repaired. To prevent fouling of back streets, 93. To cleanse dirty yards and closets, 500. To prevent wet boxes To repair hatches 165. To Provide extra boxes 2. To remove hen-coops, 4.
Water Supply	30	4	30	
Pigsties .. .. .	...	...	..
Animall Improperly Kept	...	...	...
Offensive Trades .. .. .	...	...	...
Smoke Nuisances .. .. .	...	...	...
Other Nuisances	1534	...	1534	
Totals	2357	137	2307	

II.—Inspector's Report.

II.—HOUSING OF THE WORKING CLASSES ACT, 1890.			No.	Remarks.
Formal Notices served ... ..	..	...	10	
Dwellings dealt with ... ..	..	...	..
Dwellings made habitable after formal notice	...	...	10	
Closing Orders applied for ... ..	..	...	...
Closing Orders granted by Magistrates	...	...	...
Dwellings permanently closed ... ..	..	...	12	
Number of Houses erected during the year ... ..	...	...	35	Being 14 self contains and 21 tenements.
Number of such houses occupied during the year ... ..	...	...	35	
IV—WATER, FOODS AND DRUGS.				
Samples of Water taken for analysis ... ..	...	...	...	During the year 4 cases of adulteration of Milk by added water have occurred. Three cases being light they were cautioned by letter by resolution of Council. In the other case adulteration was heavy 7.50 per cent of added water, but owing to the death of the purchaser proceedings could not be taken.
Samples of Water condemned as unfit for use	...	...	...
Seizure of Unwholesome Food ... ..	...	...	...
Convictions for exposing or selling unwholesome Food ... ..	...	...	...
Samples of Food and Drugs taken for Analysis	...	...	41	
Samples of Food found Adulterated ... ..	..	...	..
V.—PRECAUTIONS AGAINST INFECTIOUS DISEASE.				
Lots of infectious bedding stoveo or destroyed	...	...	147	Every notified case visited and printed precautionary instructions sheet left at the houses with ticket for disinfectants. 46 cases were removed to the isolation hospital and houses and bedding disinfected. The remainder of the cases were isolated and visited until better, and then the houses and bedding disinfected.
Houses disinfected after Infectious Disease...	...	...	147	
Schools do. do. do. do. do. do.	..	..	4	
Prosecutions for exposure of infected persons or things .. ..	...	...	...
Convictions for do. do. do. do.	...	...	...

JOHN S. CALLIS, INSPECTOR OF NUISANCES

February 1907.